

Work Order ID 138364

Tuesday, October 27, 2015 11:27:11 AM

647.7817
B 138364
REV. N/C

138364

Page 1

Item ID: 647.7817

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Bracket

Start Date: 10/26/2015 Start Qty: 2.00

2

108H
108

Cust Item ID:

Required Date: 10/26/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: MLS

Date: OCT 29 2015

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.7800	n/c								

100

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blanks at 4.25"

0.00

0.00

DAS
20
9-89

15-11-04

110

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio F313

DWG REV: N/C

FOLIO REV: AA

0.01

0.01

DAS
20
9-89

15-11-05

2- deburr and break all sharp edges

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : ☐			
Misidentified ☐	☐	Past Due ☐	☐				

Work Order ID 138364

Tuesday, October 27, 2015 11:27:11 AM

138364

Page 2

Item ID: 647.7817 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Aft Bracket
 Start Date: 10/26/2015 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 10/26/2015 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00				10	Ø		DAS 20 9-89 15-11-05
120									
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00				10	Ø		DAS 44 9-89 15/11/05
130									
QC	Memo	0.00							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00				CX		NOV 06 2015	10
140									
Outsource4	Memo	6.00							
Outsource process - Anodize	Issue P/O to ATG : <u>30385</u>								
	1- Black Anodize as per Dwg 647.7800								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Comformity is required								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
3:									

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : _____			

Work Order ID 138364

Tuesday, October 27, 2015 11:27:11 AM

138364

Page 3

Item ID: 647.7817

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Aft Bracket

Stop

NS2

Start Date: 10/26/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/26/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

Packaging

Memo

0.00

Packaging

10x SP15-11-19

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

②

DAS
38
NOV 20 2015

180

Identify as per dwg & Stock Location: QCK115 0.00***180***

Packaging

Memo

0.00

Packaging

10 MW 15-11-20

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Work Order ID 138364

Tuesday, October 27, 2015 11:27:11 AM

138364

Page 4

Item ID: 647.7817

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Aft Bracket

Stop ***NS2***

Start Date: 10/26/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/26/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

MLJ 15-11-23
MLJ 15-11-23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

Tuesday, October 27, 2015 11:27:10 AM

Page 1

Work Order ID: 138364

138364

Parent Item: 647.7817

647 7817

Parent Item Name: Aft Bracket

Start Date: 10/26/2015

Required Date: 10/26/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev A RQ 14.08.27 Verified by DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B1.500X1.500		Purchased	No				f	27.2030		2.105263		DAS	
M7075T6B1.500X1.500									**	3.9125'		20 9-89	15-11-04
7075 T6 BAR 1.500 x 1.500													

Used this material also

Location	Loc Qty	Loc Code
MAT006	27.203	
M131357	1.25	
M132693	13.953	
M133416	12	

1.2873'

*For this batch only
15.11.04*

7075-T6 B 1.250 X 2.000

(M132452)

(M132693)

2.200'

.425'

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04487

SHEET 1 OF 1

DWG NO. 647.7800

REV: NC

PREPARED BY J. SOTO

DATE: 04/07/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: BRACKET

APPROVED BY:

ENGR

MFG

QC

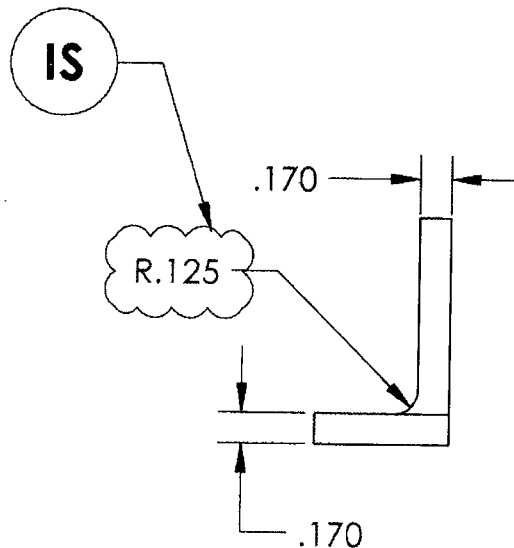
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

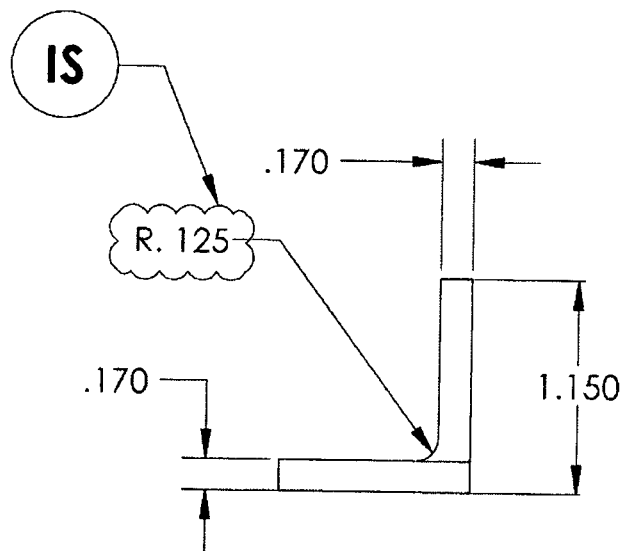
REASON: REVISED DRAWING DIMENSIONS.

ECR: D-14-03

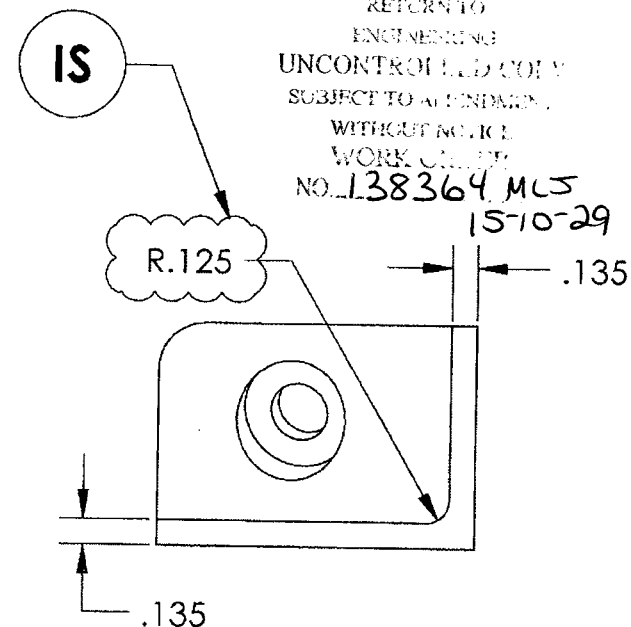
SHEET 4, ZONE B5 IS:



SHEET 5, ZONE C4 IS:



SHEET 9, ZONE D1 IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO ALL STANDARD
WITHOUT NOTICE
WORK ORDER
NO. 138364 MLS

15-10-29

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL
INDUSTRIES, INC.

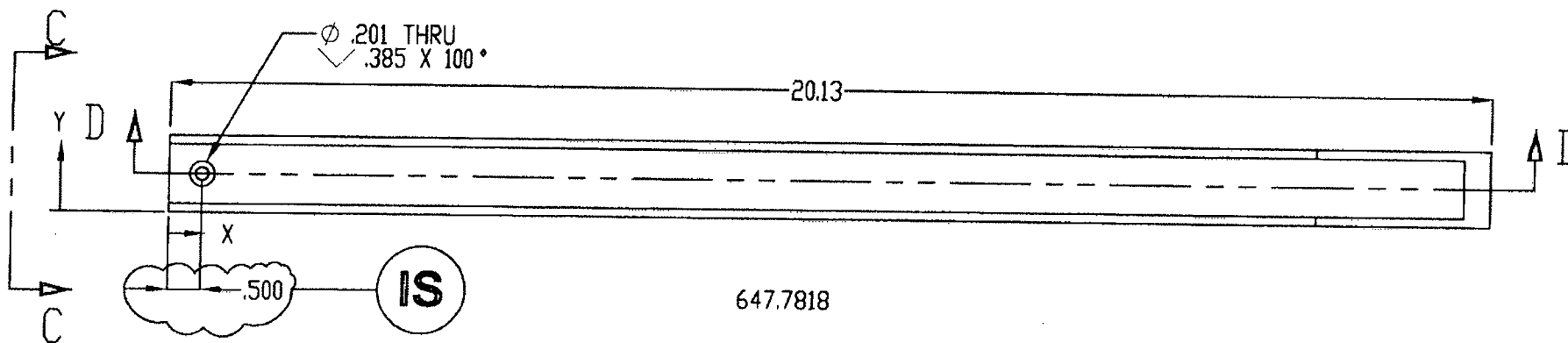
ENGINEERING CHANGE NOTIC NO. 03128 SHEET 1 OF 1
DWG NO. 647.7800 REV: NC PREPARED E. CASTELLANI BY DATE: 06/06/11 EFFECT ON DWG
DWG TITLE: BRACKET ☐ INC. ☒ UNINC.

APPROVED BY: ENGR *[Signature]* MFG *[Signature]* QC *[Signature]* EFF: CURRENT ORDER

TRANSACTION CODES (TC)
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED MISSING DIMENSION ON 647.7818.

SHEET 6, ZONE B1:



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION	
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

1 2 3 4 5 6 7 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: PR2		N/C
N/C	INITIAL RELEASE	12-21-09	P. BRAVO

NOTES:

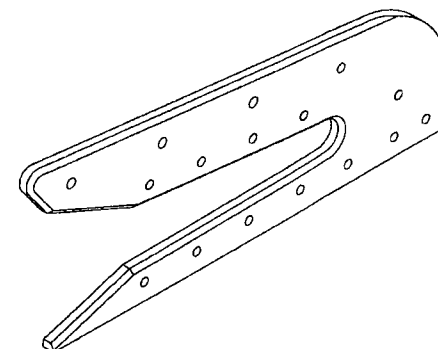
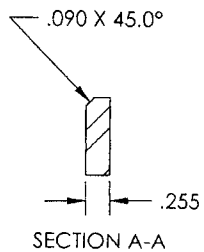
- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: ANODIZE PER MIL STD-A-8625, TYPEIII, CLASS 2, COLOR BLACK
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120

UNINCORPORATED ECN(s)

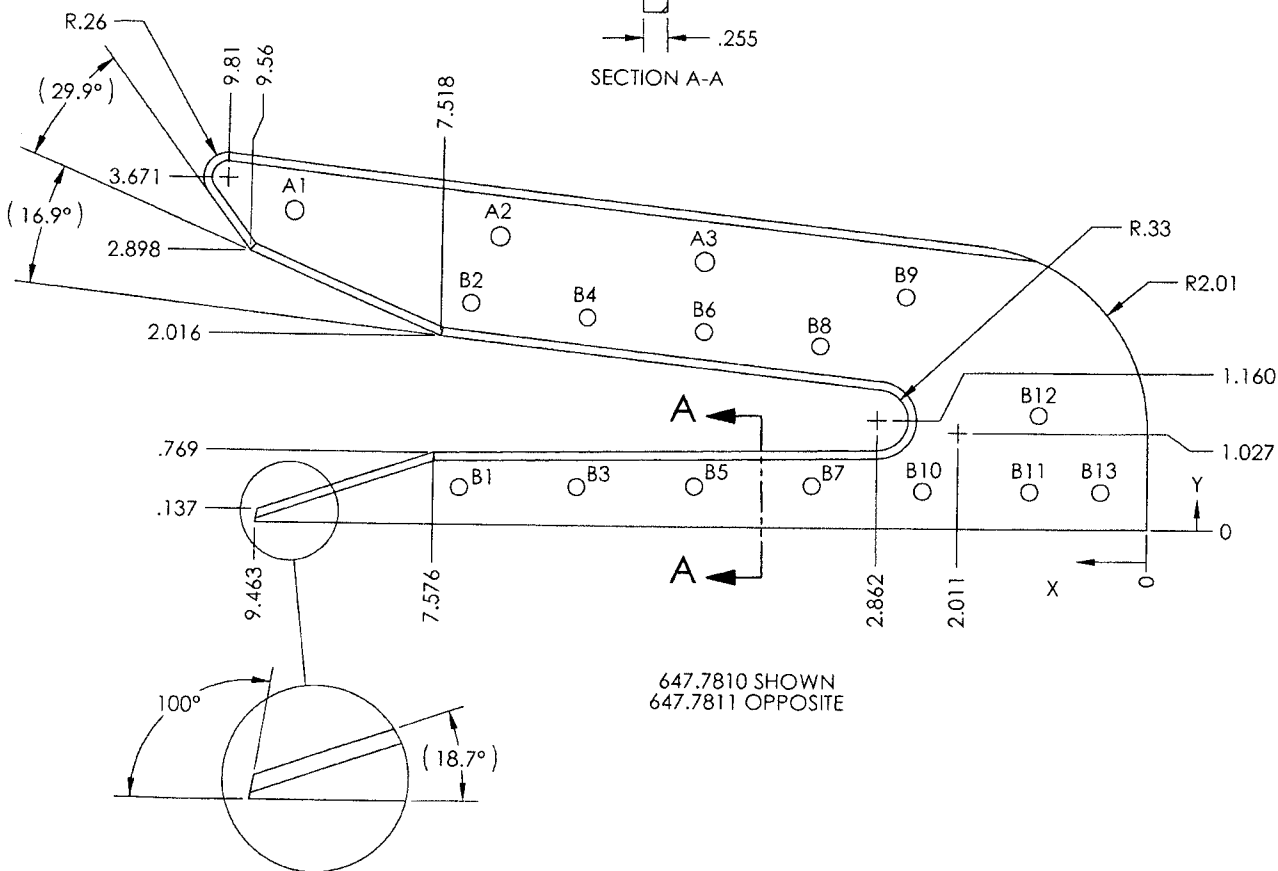
03128, 04487

		647.7822	EYE BOLT FITTING RH	△	△
		647.7821	EYE BOLT FITTING LH	△	△
		647.7820	CROSS BRACKET AFT	△	△
		647.7819	CROSS BRACKET FWD	△	△
		647.7818	MOUNTING CHANNEL	△	△
		647.7817	AFT BRACKET	△	△
		647.7816	AFT BRACKET	△	△
		647.7815	FORWARD BRACKET	△	△
		647.7814	FORWARD BRACKET	△	△
		647.7813	CENTER PLATE LOWER	△	△
		647.7812	CENTER PLATE UPPER	△	△
		647.7811	BRACKET B	△	△
		647.7810	BRACKET A	△	△
	F/N	PART #	DESCRIPTION	MAT'L	SPEC
QTY	PARTS LIST				
NEXT ASSY (S)	ORIGINAL DATE 11-05-09 DRAWN BY: J. ANDERSON CHECKED BY: P. BRAVO DRAWING APPROVAL: 30 CONF. NO. 12-0109				
647.7300	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300				
647.7400	BRACKET				
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 1 PLACE DECIMALS ±.005 ANGLES ±.5°				
	REV	CAGE CODE	DWG NO.	REV	
	B	07M26	647.7800	N/C	
	SCALE NONE				SHEET 1 OF 9

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647.7810
647.7811 OPPOSITE



647.7810 SHOWN
647.7811 OPPOSITE

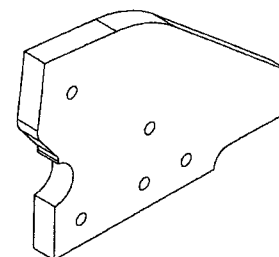
TAG	X LOC	Y LOC	SIZE
A1	9.092±.002	3.332±.002	Ø.201 THRU
A2	6.906±.002	3.083±.002	Ø.201 THRU
A3	4.720	2.835±.002	Ø.201 THRU
B1	7.300±.002	.397±.002	Ø.177 THRU
B2	7.203±.002	2.369±.002	Ø.177 THRU
B3	6.050±.002	.415±.002	Ø.177 THRU
B4	5.961±.002	2.228±.002	Ø.177 THRU
B5	4.800±.002	.433±.002	Ø.177 THRU
B6	4.719±.002	2.088±.002	Ø.177 THRU
B7	3.550	.450	Ø.177 THRU
B8	3.476	1.947	Ø.177 THRU
B9	2.575	2.475	Ø.177 THRU
B10	2.380	.400	Ø.177 THRU
B11	1.250	.400	Ø.177 THRU
B12	1.160	1.220	Ø.177 THRU
B13	.500	.400	Ø.177 THRU

ORIGINAL DATE UNCL-DA-791 11-05-79		APICAL INDUSTRIES	
DRAWN BY E. A. MORRISON		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY J. BRAVO		BRACKET	
DRAWING APPROVAL J. BRAVO		SCALE: NONE	
CONTRACT NO.		SHEET 2 OF 9	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		REV. N/C	

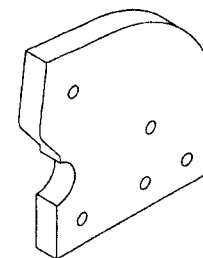
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

IAG	X LOC	Y LOC	SIZE
1	2.575±.002	2.475±.002	Ø.177 THRU
2	2.380±.002	.400±.002	Ø.177 THRU
3	1.250±.002	.400±.002	Ø.177 THRU
4	1.160±.002	1.220±.002	Ø.177 THRU
5	.500±.002	.400±.002	Ø.177 THRU

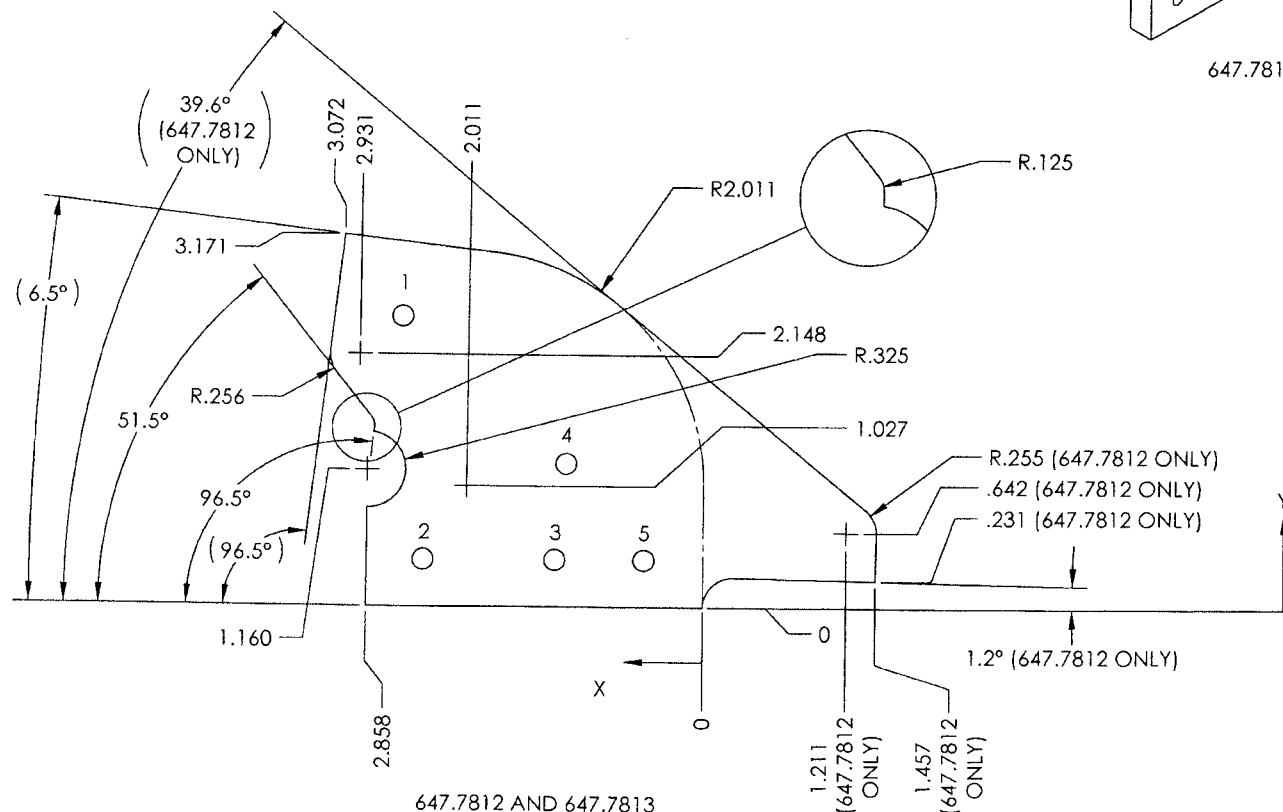
REV.	DESCRIPTION	DATE	APPROVED



647.7812



647.7813

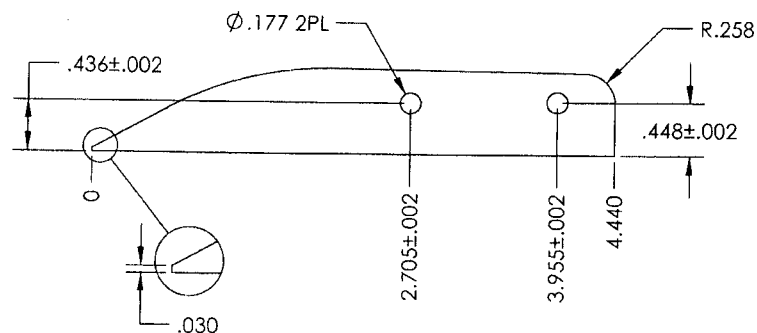
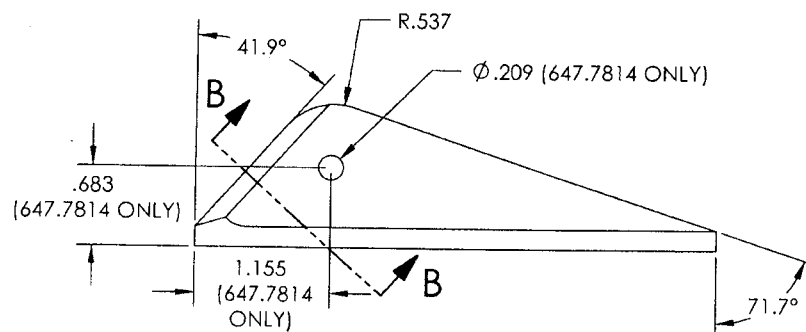
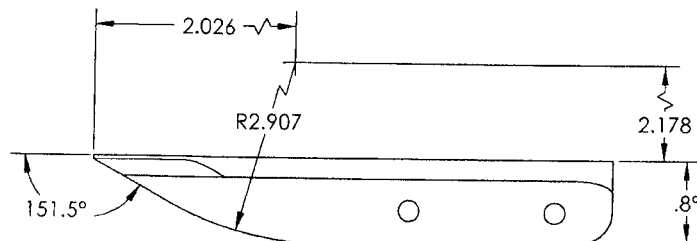


647.7812 AND 647.7813

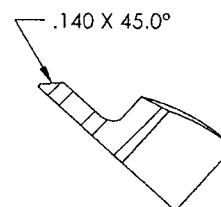
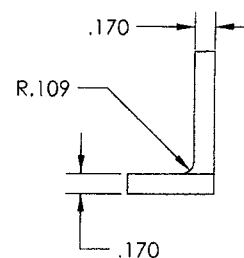
ORIGINAL DATE ENC-04-79	11-01-09	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY E. ANDERSSON	CHECKED P. BRAYO	BRACKET	
DRAWING APPROVAL P. BRAYO		SCALE NONE	
CONTRACT NO.		SHEET 3 OF 9	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV B 07M76	DWG. NO 647.7800

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

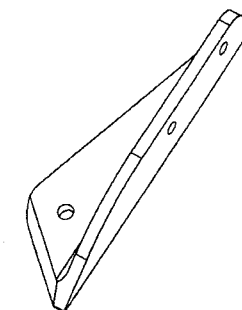
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



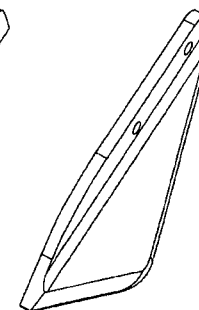
647.7814 SHOWN
647.7815 OPPOSITE



SECTION B-B



647.7814



647.7815

ORIGINAL DATE: 11-05-09
DRAWN BY: CHECKER
S. ANDERSON P. BRAVO
DRAWING APPROVAL: P. BRAVO
CONTRACT NO.:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

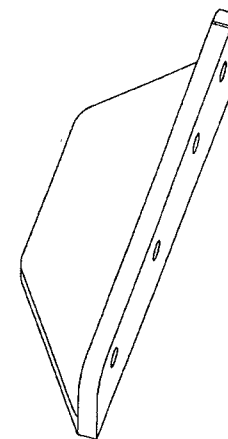
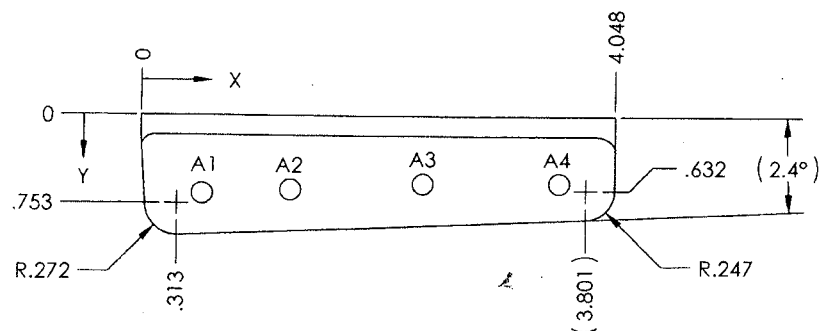
BRACKET

SHEET	C1 SE CODE	DWG NO.	REV
B	07M26	647.7800	N/C
SCALE: NONE			SHEET 4 OF 9

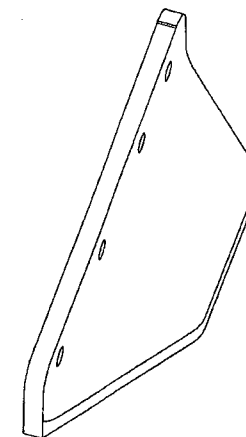
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

TAG	X LOC	Y LOC	SIZE
A1	0.527±.002	5.765±.002	Ø.177 THRU
A2	1.186±.002	5.541±.002	Ø.177 THRU
A3	2.314±.002	5.485±.002	Ø.177 THRU
A4	3.486±.002	5.73±.002	Ø.177 THRU

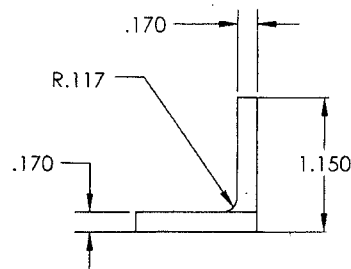
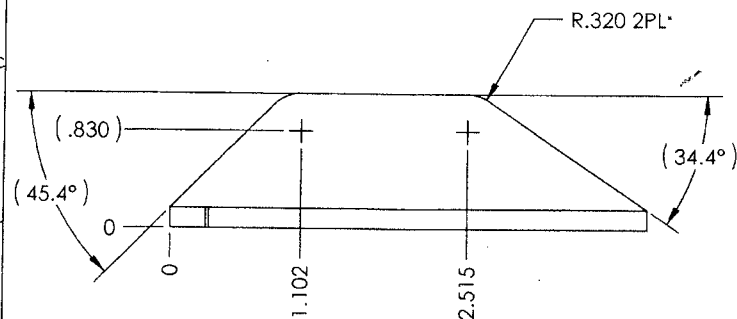
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



647.7816



647.7817

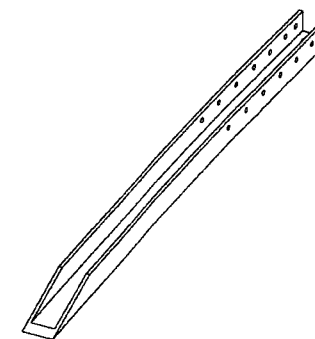
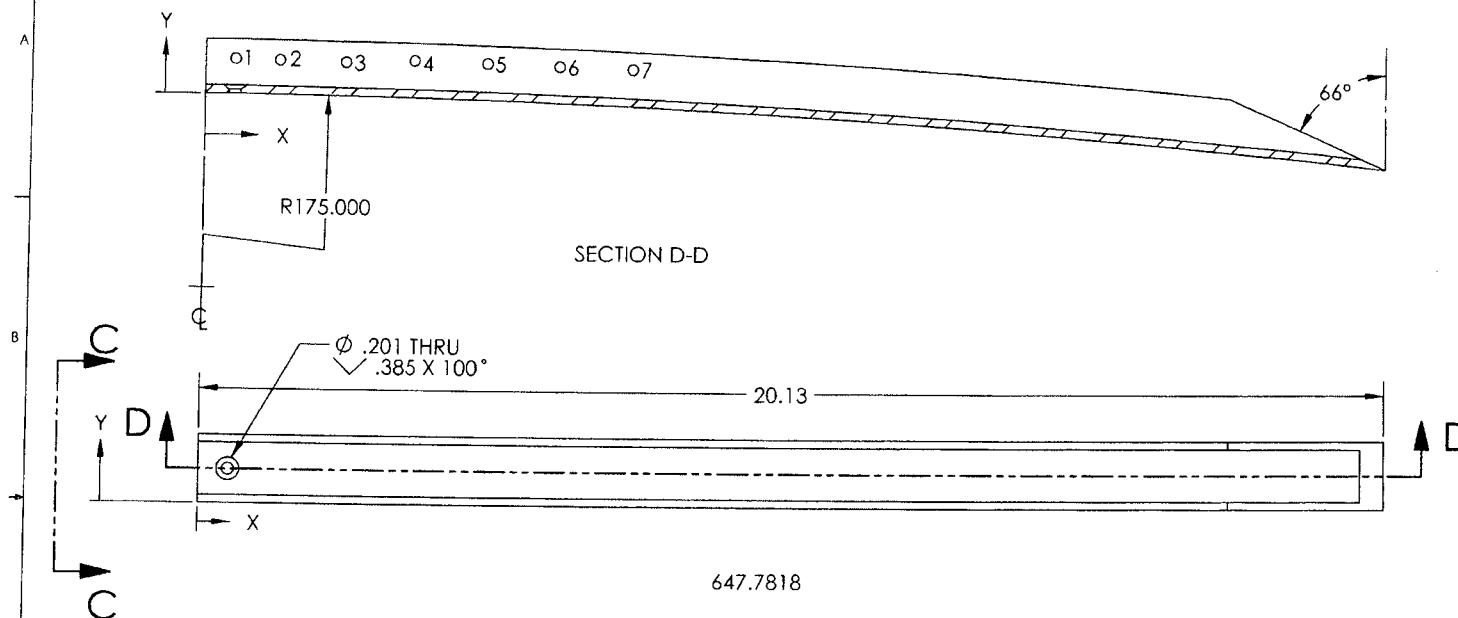


647.7816 SHOWN
647.7817 OPPOSITE

ORIGINAL DATE (MM-DD-YY)	11-05-09	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
DRAWN BY	CHECKER				
F. ADDRESS	R. BRAYO	BRACKET			
DRAWING APPROVAL P. BRAYO					
CONTRACT NO.		SRE CAGE CODE DWG. NO. REF. 0 07M6 647.7800 N/C SCALE NONE SHEET 5 OF 9			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. PLACE DIMENSIONS 5:1 2. PLACE DECIMALS 3:000 3. DECIMALS 1:1					

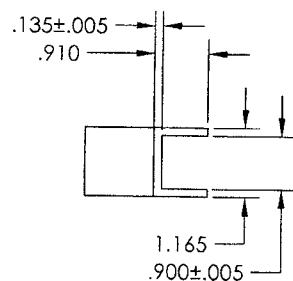
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



647.7818

647.7818



SECTION C-C

TAG	X LOC	Y LOC	SIZE
1	.506±.002	.578±.002	Ø.177 THRU
2	1.256±.002	.57±.002	Ø.177 THRU
3	2.386±.002	.549±.002	Ø.177 THRU
4	3.557±.002	.581±.002	Ø.177 THRU
5	4.806±.002	.544±.002	Ø.177 THRU
6	6.055±.002	.507±.002	Ø.177 THRU
7	7.305±.002	.470±.002	Ø.177 THRU

ORIGINAL DATE: 11-05-09
 DRAWN BY: E. ANDERSON
 CHECKED BY: P. BRAVO
 DRAWING APPROVAL: P. BRAVO
 CONTRACT NO:

APICAL INDUSTRIES
 2608 TEMPLE HEIGHTS DR.
 OCEANSIDE, CA. 92056-3512 (760)724-5300

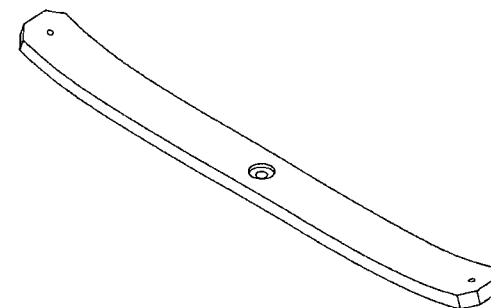
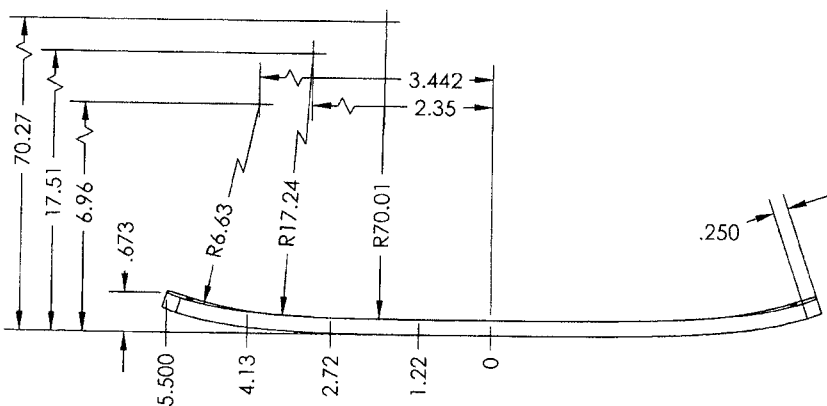
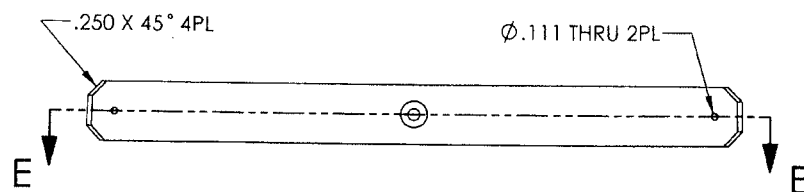
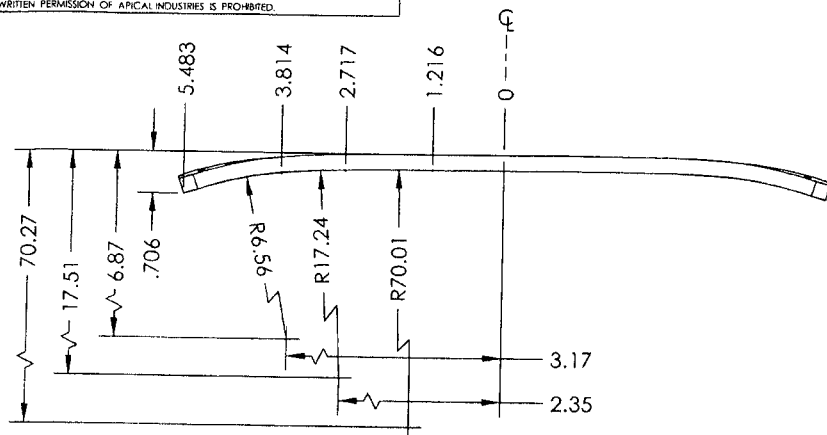
BRACKET

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ARE:
 3 PLACE DECIMALS ±.01
 2 PLACE DECIMALS ±.005
 ANGLES ±.5°

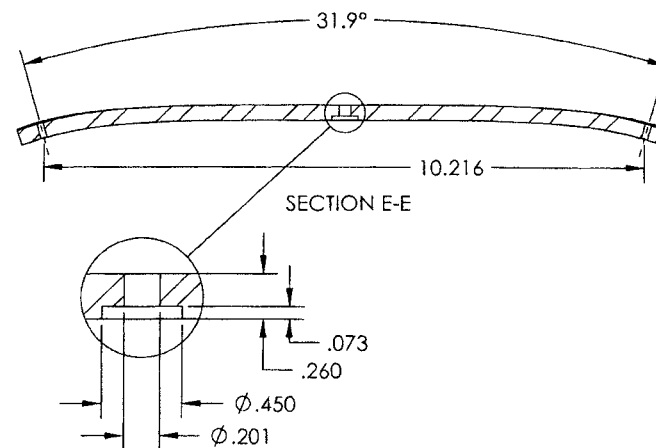
SHEET	CAGE CODE	QWS. NO.	REV.
B	07M26	647.7800	N/C
SCALE: NONE			SHEET 6 OF 9

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



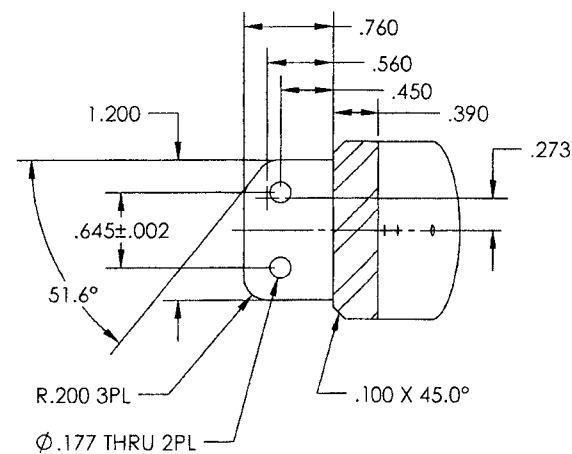
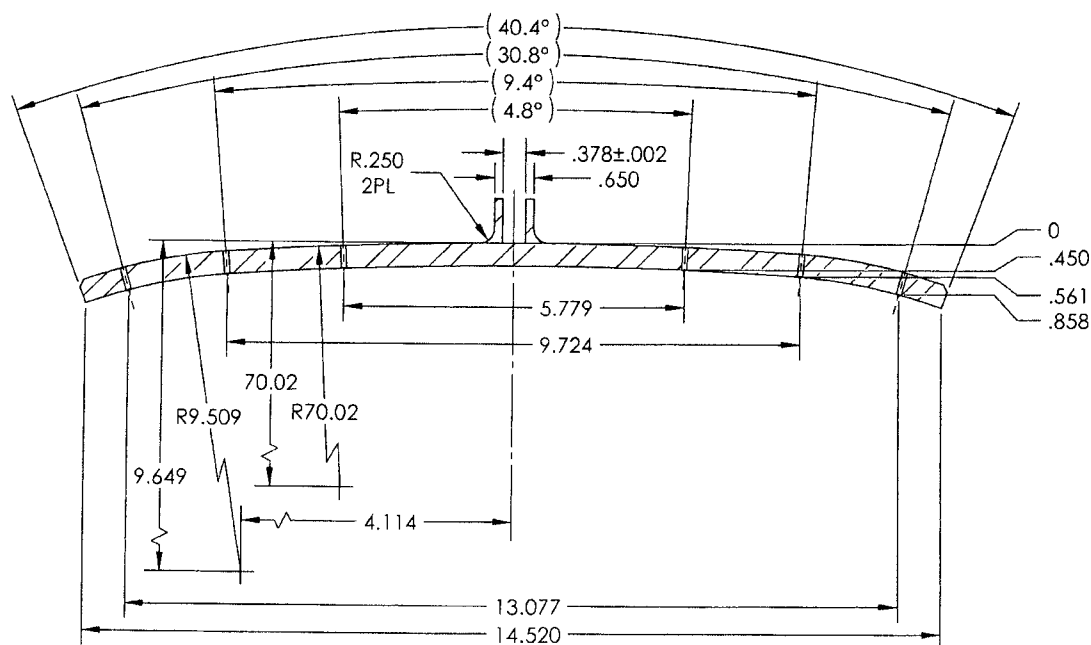
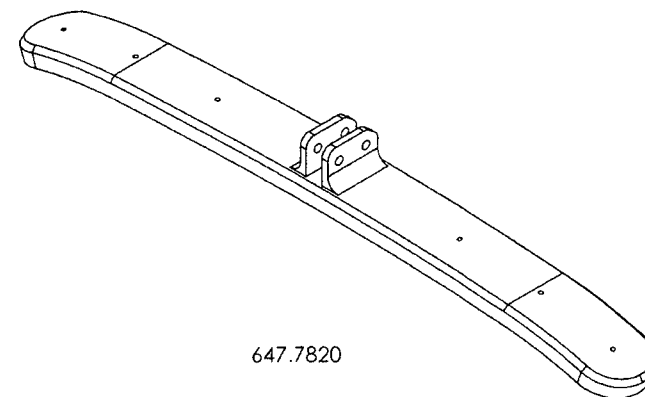
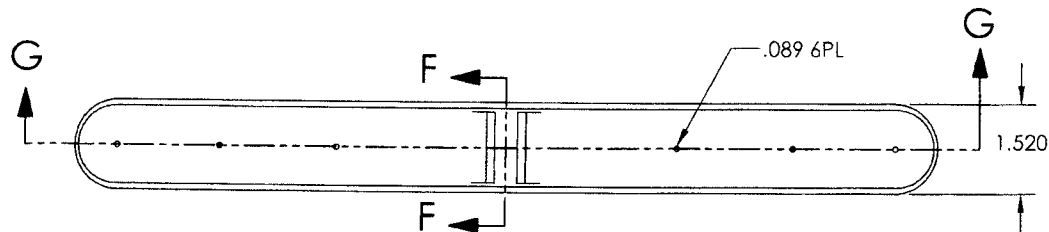
647.7819



ORIGINAL DATE JANUARY 1991 11:05:00		APICAL INDUSTRIES	
DRAWN BY E. ANDERSON / P. BRAVO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		BRACKET	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.2		SHEET B 07/02/96	DWG NO. 647.7800
		REV. N/C	SHEET 7 OF 9

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



SECTION F-F

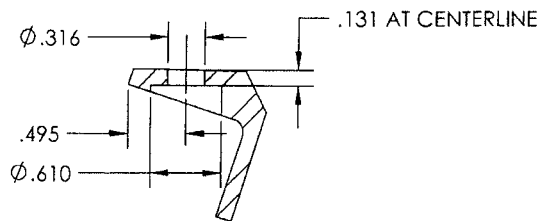
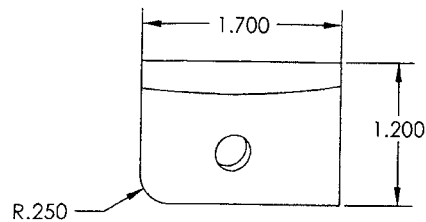
SECTION G-G

ORIGINAL DATE (DD-MMM-YY) 11-01-09		APICAL INDUSTRIES	
DRAWN BY: CRECKER		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAVO		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL: P. BRAVO		BRACKET	
CONTRACT NO.		647.7800	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .001 ANGLES ± .5°		SCALE: NONE	SHEET 8 OF 9

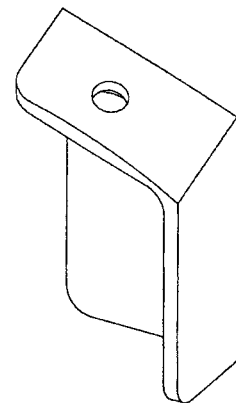
1 2 3 4 5 6 7 8

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

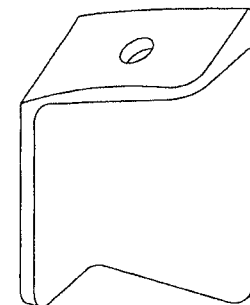
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REV.	DESCRIPTION	DATE	APPROVED



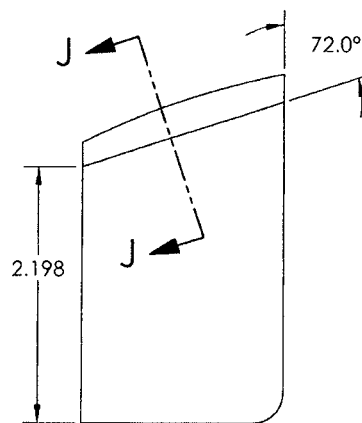
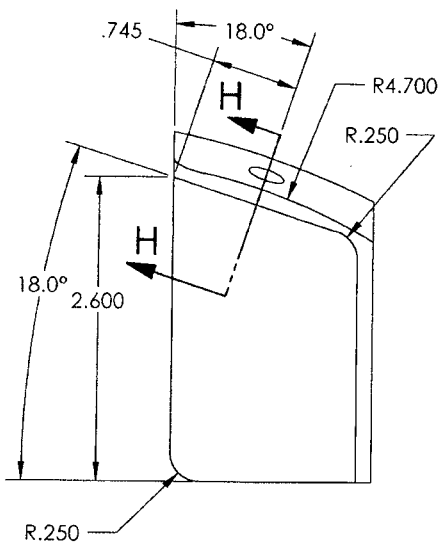
SECTION H-H



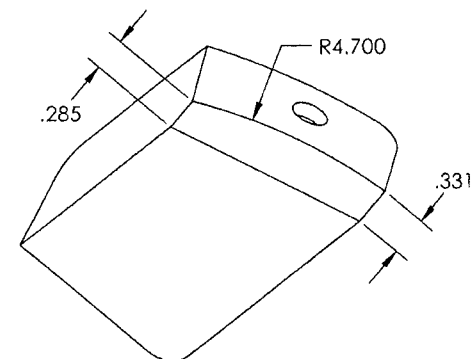
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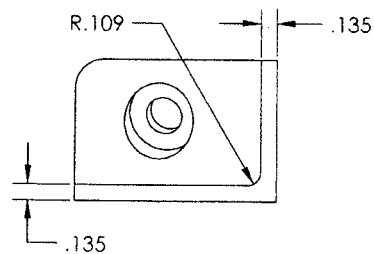
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SECTION J-J



SECTION K-K



647.7821 SHOWN
647.7822 OPPOSITE

ORIGINAL DATE DWG-DA-YR 11-03-00		APICAL INDUSTRIES	
DRAWN BY E. ANDERSON	CHECKED P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		BRACKET	
CONTRACT NO.		647.7800	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 2 PLACE DECIMALS ±.01 ANGLES ± 5°		SHEET B 07M26	REV N/C
SCALE NONE		SHEET 9 OF 9	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO30385

Purchase Order Date 11/6/2015

PO Print Date 11/10/2015

Page Number 5 of 7

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

12	138151	647.7815 FWD BRACKET REV. N/C	11/18/2015	8.00	\$6.85	\$54.80
----	--------	----------------------------------	------------	------	--------	---------

Yes

11/18/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total: \$54.80

13	138240	647.7816 AFT BRACKET REV. N/C	11/18/2015	10.00 ✓	\$6.85	\$68.50
----	--------	----------------------------------	------------	---------	--------	---------

Yes

11/18/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total: \$68.50

14	138364	647.7817 AFT BRACKET REV. N/C	11/18/2015	10.00 ✓	\$6.85	\$68.50
----	--------	----------------------------------	------------	---------	--------	---------

Yes

11/18/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total: \$68.50

Note:

11/10/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 64012

Date: 19-Nov-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
	Job: 20150851	PO: PO30385	Line:
10 ea	Part: 647.7816 AFT BRACKET HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150852	Rev: N/C PO: PO30385	Line:
10 ea	Part: 647.7817 AFT BRACKET HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150853	Rev: N/C PO: PO30385	Line:
8 ea	Part: 647.7610 UPPER DEFLECTOR HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150854	Rev: PO: PO30385	Line:
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 64012

Date: 19-Nov-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

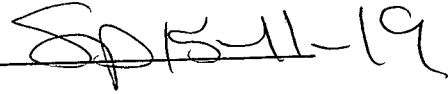
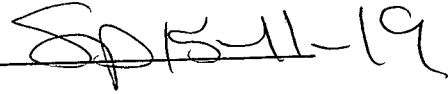
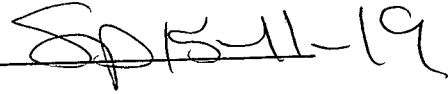
DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via								
<table border="1"><thead><tr><th>Quantity</th><th>Description</th></tr></thead><tbody><tr><td></td><td>DATE: <u>19/11/15</u></td></tr><tr><td></td><td>CERTIFIED SIGNATURE: <u></u></td></tr><tr><td></td><td>RECEIVER SIGNATURE: <u></u></td></tr></tbody></table>		Quantity	Description		DATE: <u>19/11/15</u>		CERTIFIED SIGNATURE: <u></u>		RECEIVER SIGNATURE: <u></u>
Quantity	Description								
	DATE: <u>19/11/15</u>								
	CERTIFIED SIGNATURE: <u></u>								
	RECEIVER SIGNATURE: <u></u>								